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ABSTRACT

A study assessed access and equity with regard to mildly handicapped youth who receive vocationally oriented curricula; it also assessed the extent to which existing data and data systems are reliable indicators of access and equity in vocational education. A random sample of 293 handicapped students from secondary school districts in Illinois were studied. The students were in the categories of educably mentally handicapped (EMI), learning disabled, educationally handicapped, and behaviorally disordered. Their 1981-82 individualized education programs (IEPs) and course schedules were reviewed on-site, and data were collected identifying the extent to which these students were involved in vocational and industrial arts education coursework and had vocationally related information on their IEPs. Only slightly fewer handicapped students were enrolled in vocational education/industrial arts classwork than the unhandicapped enrollment. The students' disability category did not seem to affect the quality of the vocational course placement, especially those labeled EMI. Services to handicapped placements were not being made in equitable proportions. The FACTS and the Vocational Education Data System were not found to be reliable sources for data on access and placement. (YLB)

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ACCESS & EQUITY FOR HANDICAPPED YOUTH IN VOCATIONAL EDUCATION

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INTRODUCTION

In 1963, with the enactment of the Vocational Education Act, (VEA), Congress initiated an historic and sustained effort to improve education for employment for our nation's handicapped school-aged population. Those who were responsible for the development of the Act recognized that, upon leaving school, handicapped inviduals need to be able to enter the work-force in productive and satisfying employment. Subsequent Amendments to the Act, passed in 1968 and 1976, have continued the initiatives started two decades ago, and have reinforced them with expenditure requirements, commonly called the 10% set-aside. While the states as a whole have had difficulties expending those set-asides, findings from the recent three year evaluation of vocational education nationwide (David, 1981) clearly suggest a continuing need for these types of fiscal requirements:

> The idea of reserving federal funds for the purpose of assisting and stimulating the states to provide programs and services to students with special needs is a sound approach to attaining greater equality of opportunity in vocational education. In the absence of such a provision, states and localities would very probably not be devoting even the relatively modest resources they now do to serving the handicapped...(p. xxiii)

This sentiment was echoed repeatedly in testimony offered in recent hearings on the reauthorization of the VEA of 1963. In letters entered into testimony by state special needs coordinators in vocational education there was virtual unanimity that substantial reductions in enrollments and services would occur in their respective states should the 10% set-aside provision be removed (U.S. Government Printing Office, 1982, pp.66-88; 133-265; 405-407). Subsequent draft bills to reauthorize the Act (AVA model draft bill; Hatch Bill S 1039) have also recommended maintenance of specific set-asides for handicapped individuals ("Work Begins," 1983). This continuing commitment at multiple levels of government clearly reflects a concern that handicapped youth, upon leaving the educational system, must be prepared for competitive employment and that employers must be prepared to accept them in proportions commensurate with their numbers in the general population. Thus, although a substantial amount of congressional and advocacy support in Washington exists in favor of the special/vocational education legislation, an analysis of historical practices indicates that federal initiatives, regulations, and political maneuvering represent only a portion of the educational service delivery equation (see, for example, House, 1980; Hall & Loucks, 1983). Before high-quality educational opportunities in the least restrictive setting can be delivered to handicapped students, state and local school district personnel must accept the federal mandates and develop programs and services to meet the needs of the students, to be served.

At the time of this research, the spirit of the P.L. 94-142, and P.L. 94-482 legislation, as they pertain to handicapped students, has yet to be fully realized, at least in vocational programming. The reason most likely lies in two troubling and interrelated problems that continue to exist in our society despite these continuing federal initiatives.

The first is that enrollment patterns of handicapped students in regular vocational education programs continue to show: (1) depressed levels of overall enrollment relative to their numbers in the general high school population, (2) consistently high proportions enrolled in low-skill training programs, or those (such as in work study) whose goal is not related to occupation-specific training at all, and (3) consistently high levels of mildly handicapped students whose regular vocational education is occuring without benefit of supportive services (primarily learning disabled) or who are being trained in segregated vocational education or special/vocational education classes (primarily mildly mentally retarded).

The second major pattern relates to persistently depressed levels of employment of handicapped persons who are willing and able, and available to work. A brief summary of each of these problem areas follows.

Enrollment Patterns

Problems in enrollment of handicapped youth in vocational education have been documented for about a decade now. In 1973, the U.S. Department of Education reported handicapped enrollment in vocational education to be 1.9% (cited in Phelps, 1982). Concurrently, Olympus Research Corporation (1973) suggested that of those 1.9% who were enrolled nationwide, (a) nearly 70% were enrolled in segregated programs, and (b) 63% were enrolled in non-skills classes such as prevocational programs.

There is some evidence of a weakening of these patterns in more recent national datasets. The Office of Civil Rights Survey of the Public Schools (OCR, 1980) shows for the 1979-80 school year, enrollment of handicapped students in comprehensive high schools and area vocational centers was 2.94% and 4.96% respectively. Similarly, the Vocational Education Data System (VEDS) 1979-80 data place the overall unduplicated handicapped enrollments in secondary vocational education at 3.0% (NCES, 1982). Thus it is apparent that, overall, handicapped students may be making gains in access to vocational education programs, although certainly these data do not show enrollments proportionate to their estimated percentage incidence levels.

Less encouraging, however, are the most recent conclusions concerning the program quality for those who have gained access to vocational education programs. The OCR (1980) data indicated, for example, that more than 56% of the total Custodial Services enrollment in Area Vocational Centers (AVC) were handicapped, as were more than 11% of the Food Services enrollees. Similarly, both comprehensive high schools and AVC's showed substantially elevated enrollments of handicapped persons in Work Study programs. Also, Nacson and Kelly (1980) in their NIE substudy research reported differential treatment of mildly handicapped students, depending upon disability status. These kinds of conclusions were echoed by Beuke, Lukas, Brigham, Glick, and Breen, (1980) in their NIE substudy research, by Wright, Cooperstein, Renneker, and Padilla, (1982, p. 81) in a summary report of three longitudinal studies of the implementation of P.L. 94-142, and in the Fourth Annual Report to Congress on the implementation of P.L. 94-142, (U.S. Department of Education, 1982a, p. 23). Of special concern were the difficulties concerning rural vocational programming (National Rural Research and Personnel Preparation Project, 1980) and the unavoidable fiscal difficulties associated with appropriately serving secondary handicapped students in vocational training programs (National Association of State Directors of Special Education, 1980).

Employment Patterns

Recently, NCES surveyed the class of 1979 and found that, despite a national unemployment rate of 16.5%, graduates of secondary vocational education programs experienced only a 9.7% unemployment rate. Their conclusion:

> Vocational education programs are apparently fulfilling the purpose for which they were intended: training people for jobs. ("Unemployment Rates," 1982, p. 651)

It is also important to note that this positive employment status occured at a time when secondary vocational enrollment was increasing slightly its percentage of the total secondary enrollment. (U.S. Department of Education, 1982b)

Employment patterns of handicapped individuals have, on the other hand, displayed distressingly high levels of unemployment and underemployment. Bowe, (1978), citing the 1970 Census data reported 42% of those disabled six months or longer were employed, and 63% of those who were employed were at or near the poverty level. Levitan and Taggert (1976), in an often-cited study, placed the employment rate at 40%. And in 1980, Bowe further described those who were employed to indicate that 85% earned less than $7,000, and 53% earned less than $2,000.

Preliminary data are now available from the 1980 Census, and from the Current Population Survey studies conducted in 1981 and 1982. Bowe, (1983a) has again analyzed these data, and, as he states in his Executive Summary:

> The news is both good and bad. It is heartening to see that full-time workers with disabilities earn about as much as do their nondisabled counterparts. But the fact that few are working spurs us to redouble our efforts to enhance employment of disabled people. (p. 5)

Specifically, the proportion of disabled individuals who were not participating in the labor force and who specified their disability as the reason, rose 39% in the decade between 1970 and 1980--from 40% to 51%. This was primarily because far fewer disabled individuals in 1980 than in 1970 who <u>were</u> employed indicated that their disability limited their workability. Also, unemployment rates for disabled individuals were nearly double that of their non-disabled counterparts. In terms of income levels, slightly more than 70% of disabled individuals who were employed earned less than $8,000, and 26.6% earned less than $2,000.

Data concerning employment experiences of mildly handicapped high school graduates are virtually nonexistant. One small study that has appeared (Meyers, Messerer, & Bachman, 1981) suggests that this population experiences higher unemployment rates and suffers from lack of generic job survival and interpersonal skills.

A final employment pattern for handicapped persons is concerned with employer attitudes about hiring handicapped individuals. Employers have long been skeptical about hiring handicapped workers for a variety of reasons, virtually all of which are unfounded in the literature (Mithaug, 1979). Although the literature is relatively thin in this area, most recent evidence (Koestler, 1979; Federal Register, 1978) confirms that handicapped workers perform at their jobs as safely, as consistently, and as productively as their nonhandicapped colleagues.

The foregoing discussion suggests the problem of this study, namely, that little data are available that allow a reliable examination of the relative

extent to which: (a) different handicapped students have access to the full range of vocational education programs, and (b) students who are handicapped and do gain access to vocational education are served in an equitable manner.

OBJECTIVES

In December, 1982, the U.S. Office of Special Education awarded the Office of Career Development for Special Populations (OCDSP) a research contract to examine these access and equity considerations. Its broad purposes were threefold:

(1) to assess access - the extent to which mildly handicapped youth receive vocationally oriented curricula from a variety of sources;

(2) to assess equity - the extent to which those students who are the recipients of vocationally oriented curricula receive that curricula in an equitable manner; and

(3) to assess the extent to which existing data (primarily the IEP) and existing data systems (primarily the VEDS and the FACTS) are reliable indicators of access and equity in vocational education.

For the first broad purpose above, the following questions organized the research effort:

(1) By what different programs (vocational education or special education) do EMI, LD, BD, and EH students receive vocationally oriented curricula?

(2) How does the existence of vocationally-related annual goals on the IEP differ for students with different categorical labels, different sexes, and different races?

(3) How do the variables of categorical disability, sex, and ethnicity affect access to these different programs?

(4) How does access to vocational education/industrial arts curricula differ for mildly handicapped students versus nonhandicapped students?

(5) How is access to vocational education/industrial arts curricula affected by the size of high school enrollments, and the district's per pupil expenditures?

For the equity purpose of the study, (purpose #2 above), the following questions were specified:

(1) What relationships exist between the categorical disability of students who have access to vocational programs and the restrictiveness of educational placement?

(2) What relationship exists between access to vocational education and the existence of vocational assessment information of the IEP?

(3) What relationships exist between the type of vocational assessment information of the IEP and such variables as categorical disability, sex, and ethnicity.

(4) What is the nature and scope of vocationally oriented curricula (including vocational education and annual goals on the IEP), to which handicapped students are given access?

For purpose #3, the use of existing data and data systems, the following questions were analyzed:

(1) How valid an indicator of vocational education/industrial arts access is the "VE as a related service" listing on the Illinois child-count system (Funding and Child Tracking System, FACTS)?

(2) What relationship exists between placement setting in vocational education and the LRE code on the FACTS?

(3) How well do the FACTS and VEDS (Vocational Education Data System) interface in their ability to measure access to vocational education curricula?

PROCEDURES

The 1981-82 child-counts from a random sample of 98 secondary school districts in Illinois were reviewed. All handicapped students in the cagegories of educably mentally handicapped, learning disabled, educationally handicapped, and behaviorally disordered were included in the study, resulting in a sampling frame of 3,098 students. Data on these students were then collected along the variables of disability, ethnicity, sex, restrictiveness of educational environment, school size, school wealth, and whether or not vocational education was listed as a related service for the student.

Finally, a random sample of 377 students was selected for further study. The 1981-82 IEPs and course enrollments (schedules) of these students were reviewed on-site, and data were collected identifying the extent to which these students were involved in vocational and industrial arts education coursework, and had vocationally-related information on their IEPs. Ultimately, complete information was collected on 293 of these students, representing 40 school districts. For more complete information on the procedures used in this study the reader may obtain copies of the final report from the OCDSP at the University of Illinois. Additionally, a manual has been developed that outlines procedures in which local administrators may engage to assess and equity considerations in their own school districts. That manual is also available.

RESULTS

To begin with, a broad perception about the state-of-the-art of vocational/special education, at least in Illinois, can be stated. In general, vocational/special education appears widely accepted, supported, and pervasive. Informal conversations with special education administrators and teachers during all phases of this study have supported a widely-held belief in its merit. Indeed, many have also indicated that a study of the 1981-82 school year underestimates its present status. They were almost universally supportive of this exploratory research, and seemed to anticipate unequivocally positive results. During the on-site IEP analyses, some of the more current IEPs that were informally observed in the student's cumulative folders seemed to support these beliefs. Many of the current IEP forms include subheads in the present levels of educational performance section that were specifically reserved for vocational/prevocational information. Given the relative nascency of vocational/special education, and indeed secondary special education generally, this represents a remarkable improvement for employment training for handicapped students, given the kinds of options that existed nearly a decade ago.

Access

Access to vocational education has been defined in several different ways in this study. Depending upon which measure is employed, a variety of conclusions can be reached about relative access to vocational education for mildly handicapped high school students. First, however, some indicator of nonhandicapped access to vocational education must be acknowledged for comparative purposes. Reviewing the VEDS enrollments of the 40 school districts participating in this study, about 74% of their secondary students received vocational education in 1981-82. Reliability difficulties with these estimates notwithstanding, this figure will be used as a benchmark against which to measure equality of access for handicapped students.

Probably the strictest but most comparable definition of access would entail using one in which only those handicapped students enrolled in qualified vocational education courses would be considered to have access. Under this definition, 67.9% of the 293 students in the sample were enrolled in vocational education/industrial arts coursework, representing only slightly less involvement than the nonhandicapped enrollment. By adding any of the other measures of access that were examined in this study (VE as a related service, vocationally-related annual goals, or vocationally oriented special education programs), the proportion would exceed that of the nonhandicapped population.

A more popular technique to measure access has been to cite the overall percentage of handicapped students who are reported to be enrolled in vocational education. Benson and Hoachlander's (1981) recent NIE research have placed those enrollments at 3.3% suggesting underenrollment nationwide. The primary data base for those reports, however, has been the VEDS, and it is particularly unreliable in terms of handicapped enrollment. In Illinois, for example, an informal interview with a staff person with the Civil Rights section of the Department of Adult, Vocational and Technical Education (DAVTE) indicated that neither the VEDS, the FACTS, nor the school district claim forms seemed to be able to reliably project frequencies of enrollments in vocational education of different subgroups of handicapped students. She also indicated, concurrent with this research, that typically their on-site evaluations of school districts found that access to vocational education was not a major issue of concern, but equity was. The conclusion that must be rendered here is that, based upon this research and under broad definitions of vocational education participation, access to vocational education may no longer be an issue for mildly handicapped high school students. Regardless of definitional problems, it seems evident that many more mildly handicapped students get access to some form of training for employment than are projected in the major national data bases.

A second access issue addressed in this study was the treatment across disability group, ethnicity, and sex. The Illinois VEDS data indicated that, as far as sex was concerned, boys were given greater access to vocational education in the sampled districts by a ratio of 1.07 to 1.0. That inequity seemed to maintain with handicapped students as well after controlling for initial disparities. At issue here, then, was not inequitable access for handicapped versus nonhandicapped students, but inequities for all boys versus all girls.

With students of different ethnicity, from the 40 school districts sampled in this study, white nonhandicapped students were nearly one and one half times as likely to receive vocational education as nonwhites. This trend was reversed, however, with handicapped students, but disability may have been a mediating factor in that reversal. Unfortunately, the numbers in this study

were simply not large enough to ascertain true trends. Finally, one's disability category, in and of itself, did not appear to overly constrain or augment access. Again, using enrollment in an established vocational education course as a measure of access, EMI students were slightly underenrolled, relative to their numbers in the sample, and BD students were substantially overenrolled. LD and EH students were enrolled in proportions virtually identical to their numbers in the sample.

Equity

Much criticism has been leveled at vocational education for its relatively inequitable treatment within. The work of Berryman (1982), Weisberg (1983), McClure (1979), and Hamilton (1979) suggest that racial and sex biases continue to persist in terms of minorities and girls being channeled into vocational education coursework that prepares its graduates for lower-paying employment. The Council for Exceptional Children, in its analysis of the OCR (1980) survey, (CEC Submits Testimony, 1982), charged similar discriminatory practices with handicapped students.

For the students examined in this study, disability status may indeed affect the quality of the vocational course placement. At the risk of oversimplifying, children labeled EMI did appear to get somewhat less equitable treatment than those in any of the other three categories in this study. Also, although the data were not tabled, a sizeable majority of the female enrollment across all disability groups was relegated to the CWT, Business Education, (primarily Typing), and Home Economics curricula. Again, nonwhite data were simply too limited to draw definitive conclusions.

A second issue of internal access that did appear in the study is concerned with services, once in vocational education. If, as Grubb (1978), and many others have maintained, a major purpose of vocational education is to provide relevant curricula for the 50% - 60% of the student body for whom college preparatory and general curricula are not particularly well-suited, then handicapped students would clearly fall into this category, and adequate services ought to be available to make those placements as successful as possible. While placements seemed to be there, the services did not. First, only about one third of the 199 sampled students who were enrolled in a vocational education course had "VE as a related service" specified for them on the FACTS child-count, and less than 40% of them had vocationally-related annual goals on their IEPs. This may be somewhat of an underestimation, since in some cases, no annual goals reflecting vocational content existed, but anecdotal information attached to the IEP indicated that assistance was going to be provided. In most cases, however, those particular students had a "VE" listed as a related service on the FACTS.

This form of inequity was triangulated through two other data sources, although both were not built into the research design per se. First, the Civil Rights staff person who was informally interviewed indicated that the comprehensiveness of services to handicapped students who were enrolled in vocational education courses was a problem statewide; she reiterated that overall access was not. Also, in reviewing transcripts for vocational coursework of handicapped students, this researcher observed a high number of "D" and "F" grades, and dropped courses. It appears, then, that placements in vocational education were being made in equitable proportions, but services to make those placements successful (and appropriate) were not.

A portion of this study was devoted to an examination of the "referral $\longrightarrow$ identification $\longrightarrow$ assessment $\longrightarrow$ placement" paradigm that has been adopted in the literature for use in vocational/special education. The point of interest

in this study was not to ascertain whether or not the components existed, but to assess the implied directionality of the "assessment → placement" part of the paradigm. In prior research on the topic, Nacson and Kelly (1980) suggested that placement in vocational education was seldom viewed to have been made as a result of assessed vocational interests and competencies. In fact, they stated:

> the academic-related identification and assessment procedures used by most school districts tended to limit the vocational options available to special needs students. In most instances, placement appeared to be contingent on performance in basic competency areas of reading, writing, and mathematics. Students who failed to achieve a level of acceptable competency in these basic skills were placed in compensatory or remedial programs. Such placement usually reduced the likelihood of participation by subgroups of special needs students in regular vocational education programs. (emphasis added, p. xiii)

The findings of this study support, in large measure, those statements above. The breakdown in service delivery appeared to rest in the lack of reliable and available vocational assessments that preceded placement, and that were related to curricula. Much of the assessment information specified on the IEPs, for example, was prior grades in vocational courses, most of which appeared to have little to do with 1981-82 course enrollments. Several school personnel indicated that they would have liked to have had in their districts the opportunity for comprehensive vocational evaluations, but interestingly, in those districts that did, rarely was the information incorporated into the IEP, nor did it appear to have substantially influenced vocational enrollment patterns. Typically, vocational evaluation reports were placed in cumulative folders, and appeared little-used, at least in terms of IEP annual goal specification, present levels of performance, or classroom placements.

Least restrictive placement in vocational education is, of course, inextricably involved with vocational assessment. What makes it even more complex, however, is that, with vocational education, many special educators have come to believe that the least restrictive environment for handicapped youth may no longer be the regular classroom, but community work-placement settings. In this study, for example, the single most widespread course option, cutting across all disability groups, was the CWT program. This was kind of a prevocational cooperative education program, typically associated with disadvantaged and handicapped students. Its function was, ostensibly, to introduce handicapped students to the world of word, and to determine work-related behavioral deficits. No school districts in this study, however, appeared to overtly incorporate CWT course achievement information into the IEP development process.

With existing data available in this study, assessing LRE equity for mildly handicapped students with different status characteristics was extremely difficult. The FACTS LRE code was not a function of vocational education placement, nor did course enrollment information allow for any distinctions beyond the mainstreamed/segregated dichotomy. The findings of Nacson and Kelly (1980), Beuke et al. (1980), Wright et al. (1981), and Wright et al. (1980), again, were supported in this study, in terms of differential treatment for students considered mentally retarded, versus the other three categories. Enrollment of EMI students in regular or mainstreamed courses was somewhat below their proportions in the sample.

As a whole, however, mildly "judgmentally" handicapped students appeared to have more access to regular vocational education coursework than these studies have portrayed. Whether or not Illinois was representative of the nation as a whole is not known.

Summary

This study was conceptually and methodologically predicated upon three major premises. The first was that individuals in any of the mildly handicapping conditions examined in this study should receive equal treatment in terms of access, assessment, and least restrictive programming, and that deviations from that "statistical independence" were important and should be reported. The second was that the "assessment $\longrightarrow$ placement" paradigm was operationally in effect in Illinois schools to the extent necessary enough to explain deviations from the first premise. The last premise was that the FACTS was a reliable enough data source to measure the paradigm. None of these premises proved true.

In terms of the first premise, individuals in the EMI group may be more homogeneous in their educationally relevant deficits than are students in any of the other categories. In a sense, then, the findings from this study of differential treatment for children labeled EMI versus all other categorical disabilities may be logical and, in fact, unimportant. Nonetheless, the lack of placement in vocational education based upon vocational assessment information still suggests treatment by label, rather than treatment by educationally relevant deficits, and makes this a potentially valuable contribution to the literature in the field. Although vocationally oriented, this study again bears witness to the pernicious effects of labeling upon educational treatment of children.

It should not have been surprising that treatment by label was found in this study, given the inadequacy of the "assessment $\longrightarrow$ placement" paradigm as an explanation of how placements were made in vocational/special education programs. If vocational assessment data cannot be used to accurately predict vocational placement, special educators have little alternative other than to make placements based upon non-vocational assessment data. The need for models of functional, curriculum-referenced vocational assessment appeared repeatedly in this research. Until these are available to special educators, the inversion of the "assessment $\longrightarrow$ placement" to the placement $\longrightarrow$ assessment" sequence will probably continue.

The lack of construct validity of the "VE" and LRE" codes on the FACTS, at least as they pertained to vocational education access and placement issues, proved to be the most disappointing and debilitating aspect of this study. Doubtless, intra-district validity existed, but the use of the FACTS across districts, except to define the initial sampling frame, proved problematic. Some of the recommendations made above should address these validity problems. Until the FACTS becomes more valid, however, longitudinal, intra-district studies, rather than cross-sectional inter-district studies such as this one should probably be conducted.

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